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Abstract:

15 **Process and Plant for Reducing Solids Containing Iron Oxide**

This invention relates to a process for reducing solids containing iron oxide, such as iron ore, in which fine-grained solids are heated and at least partly calcined in a preheating stage (2, 9). In a first fluidized-bed reactor (14) downstream of the preheating stage (2, 9), the solids are prereduced and reduced further in a second fluidized-bed reactor (16). Downstream of the second reactor (16) a briquetting stage (20) is provided, in which the solids are briquetted at a temperature above 500°C. To increase the energy efficiency of the process and improve the flowability of the solids in the briquetting stage (20), magnesite is added to the preheating stage (2, 9) together with the solids containing iron oxide, which magnesite is at least partly calcined in the preheating stage (2, 9) to obtain magnesium oxide. Furthermore, the invention relates to a corresponding plant.